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10/743,386	12/23/2003	Masahiko Matsukawa	21581-00313-US	7939
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CONNOLLY BOVE LODGE & HUTZ LLP			ZHENG, LOIS L	
1875 EYE STREET, N.W.			ART UNIT	PAPER NUMBER
SUITE 1100				1793
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,386	<b>Applicant(s)</b> MATSKAWA ET AL.
	<b>Examiner</b> LOIS ZHENG	<b>Art Unit</b> 1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 January 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3-7,10,13,14,16-18,20 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) 6,7 and 16-18 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 3-5,10,13,14,20 and 23-27 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 3/14/08
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Status of Claims***

1. Claims 1-2, 8-9, 11-12, 15, 19, 21-22 are canceled in view of applicant's amendment filed 28 January 2008. Claims 6-7 and 16-18 Claims remain withdrawn from consideration. New claims 24-27 are added. Therefore, claims 3-5, 10, 13-14, 20, and 23-27 are currently under examination.

***Prior Art***

2. Official English translation of JP'642 is provided with is Office Action.

***Information Disclosure Statement***

3. The information disclosure statement filed 14 March 2008 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 23-27 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 2002-275642(JP'642).

JP'642 teaches a conversion coating solution comprising a titanium compound, a fluoride compound and an aqueous organic high molecular weight compound such as acrylic resins, including homopolymers or copolymers of monomers having hydrophilic amino groups such as allylamine(abstract, claims 1, 9, paragraph [0065, 0067])(i.e. polyallylamine).

Regarding claim 23, the coating composition disclosed by JP'642 meets the limitations of the claimed conversion coating agent.

Regarding claim 24, since the scope of JP'642 does not require the presence of free phosphate(i.e. discussion of Compound (B) in JP'645 only requires one kind of phosphoric acid compounds, metal hydrofluoric acids and metal fluorides)(paragraph [0052]), the examiner concludes JP'642 teaches a coating agent that is substantially free of free phosphate ions as claimed.

Regarding claim 25, the claim limitation is merely stating the intended use for the claimed chemical conversion coating agent and does not add any specific limitation to or materially affect the coating agent itself. Therefore, this limitation does not render the instantly claimed coating agent patentable.

Regarding claim 26, JP'642 further teaches that the fluoride compound can be fluorozirconic acid, fluorozirconates(paragraph [0057]). Therefore, the coating solution of JP'642 comprises zirconium as claimed.

Regarding claim 27, the claim limitation regarding rinsing with water after conversion coating treatment is merely describing how the claimed conversion coating

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agent can be used and does not add any specific limitation to or materially affect the claimed coating agent itself. Therefore, this limitation does not render the claimed coating agent patentable.

Therefore, JP'642 anticipates instant claims 23-27.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 10, 13-14, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over JP'642.

The teachings of JP'642 are discussed in paragraph 5 above.

JP'642 further teaches that hydrogen peroxide is used in combination with the titanium compound in a ratio of 0.1-100 parts by weight to 10 parts by weight and hydrogen peroxide has a concentration of 3-30% by weight with respect to the solid content(paragraph [0029-0030]). The ratio between the high molecular weight resin in the coating solution of JP'642 and the titanium compound in hydrogen peroxide is 10-2000 parts by weight to 100 parts by weight with respect to solid content(claim 12, paragraph [0082])

Regarding claim 3, based on the ratio between high molecular weight resin and the titanium compound in hydrogen peroxide as taught by JP'642 above and the

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examples of JP'642, the examiner concludes that the content of the water soluble high molecular weight resin would have overlapped the claimed water soluble resin. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin range from the implicitly disclosed range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed water soluble resin range.

In addition, since JP'642 teaches that the water soluble resin has high molecular weight. Other resins alternative to allylamine are epoxy resin having a molecular weight of 400-4,000(paragraph [0063]) and polyvinyl alcohol resin having a molecular weight of 3,000-100,000(paragraph [0077]). Therefore, one of ordinary skill in the art would have found it obvious to use high molecular weight allylamine that is comparable to other alternatives such as epoxy resin and polyvinyl alcohol resin with expected success. Furthermore, the examiner concludes that the high molecular weight allylamine resin as taught by JP'642 would have implicitly overlap the claimed water-soluble resin molecular weight. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin molecular weight from the implicitly disclosed range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed water soluble resin molecular weight range.

Regarding claims 4 and 10, the hydrogen peroxide as taught by JP'642 reads on the claimed accelerator. Based on the ratio between hydrogen peroxide and the titanium compound as taught by JP'642 and the examples of JP'642, the examiner

concludes that the content of the hydrogen peroxide would have overlapped the claimed peroxide accelerator concentration. Therefore, a *prima facie* case of obviousness exists. See MPEP 2144.05. The selection of claimed accelerator concentration range from the implicitly disclosed hydrogen peroxide range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed hydrogen peroxide concentration range.

Regarding claims 5, 13-14 and 20, based on the ratio between hydrogen peroxide and the titanium compound as taught by JP'642 and the examples of JP'642, the examiner concludes that the content of the titanium compound would have overlapped the claimed titanium compound concentration. In addition, JP'642 further teaches that the pH of the coating solution is 1-7(claim 12), which significantly overlaps the claimed pH range of 1.5-6.5. Therefore, a *prima facie* case of obviousness exists. See MPEP 2144.05. The selection of claimed titanium concentration and pH ranges from the implicitly disclosed titanium concentration and pH ranges of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed titanium concentration and pH ranges.

***Response to Arguments***

8. Applicant's arguments filed 28 January 2008 have been fully considered but they are not persuasive.

Regarding claim 23, applicant argues that the coating solution of JP'642 is not a chemical conversion coating because the ground treatment agent of JP'642 is contacted with metal surface and dried by heating to form titanium oxide film.

The examiner does not find applicant's argument persuasive since the coating solution of JP'642 comprises the same coating components as claimed. In addition, JP'642 is classified internally in C23C 22/07, which is directed to chemical conversion coatings on metal surfaces(See IPC schedules C23C 22/00). Without factual evidence data showing that the coating solution of JP'642 does not react with the metal substrate, applicant's argument is merely considered as conclusive statement.

Applicant further argues that the effect of using polyallylamine in the composition of JP'642 is different from the instant invention.

The examiner does not find applicant's argument convincing. The coating solution of JP'642 comprises the claimed polyallylamine. Although polyallylamine might be used for a different purpose in the coating solution of JP'642, it does not mean it cannot also have other benefits such as improving adhesion as discussed by the instant specification. Since the coating solution of JP'642 comprises the same polyallylamine resin and the same other components, the examiner maintains that the coating solution of JP'642 reads on the claimed chemical conversion coating agent.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/

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